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CD140a

Purified Mouse Monoclonal Antibody
Catalog # AO2735a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P16234
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5B11G5
Isotype	Mouse IgG2a
Calculated MW	122670
Immunogen	Purified recombinant fragment of human CD140a (AA: extra 179-361) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5156
Other Names	PDGFRA; PDGFR2; PDGFR-2
Dilution	WB~~ 1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD140a is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDGFRA
Synonyms	PDGFR2, RHEPDGFRA
Function	Tyrosine-protein kinase that acts as a cell-surface receptor for PDGFA, PDGFB and PDGFC and plays an essential role in the regulation of embryonic development, cell proliferation, survival and chemotaxis. Depending on the context, promotes or inhibits cell proliferation and cell migration. Plays an important role in the differentiation of bone marrow-derived mesenchymal stem cells. Required for normal skeleton development and cephalic closure during embryonic development. Required for normal development of the

mucosa lining the gastrointestinal tract, and for recruitment of mesenchymal cells and normal development of intestinal villi. Plays a role in cell migration and chemotaxis in wound healing. Plays a role in platelet activation, secretion of agonists from platelet granules, and in thrombin-induced platelet aggregation. Binding of its cognate ligands - homodimeric PDGFA, homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFC -leads to the activation of several signaling cascades; the response depends on the nature of the bound ligand and is modulated by the formation of heterodimers between PDGFRA and PDGFRB. Phosphorylates PIK3R1, PLCG1, and PTPN11. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, mobilization of cytosolic Ca(2+) and the activation of protein kinase C. Phosphorylates PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and thereby mediates activation of the AKT1 signaling pathway. Mediates activation of HRAS and of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3 and STAT5A and/or STAT5B. Receptor signaling is down-regulated by protein phosphatases that dephosphorylate the receptor and its down-stream effectors, and by rapid internalization of the activated receptor.

Cellular Location

Cell membrane; Single-pass type I membrane protein. Cell projection, cilium {ECO:0000250|UniProtKB:P26618}. Golgi apparatus {ECO:0000250|UniProtKB:P26618}

Tissue Location

Detected in platelets (at protein level). Widely expressed. Detected in brain, fibroblasts, smooth muscle, heart, and embryo. Expressed in primary and metastatic colon tumors and in normal colon tissue.

References

1.World J Gastroenterol. 2016 Mar 28;22(12):3335-40.2.Gene Expr. 2015;16(3):109-27.

Images

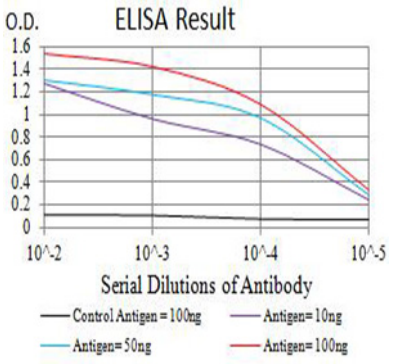
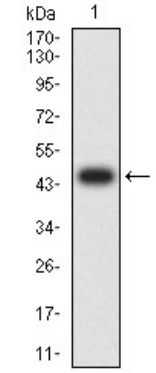


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

Figure 2:Western blot analysis using CD140a mAb against human CD140a (AA: extra 179-361) recombinant protein. (Expected MW is 46.5 kDa)



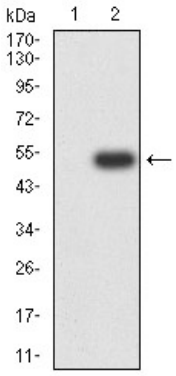


Figure 3:Western blot analysis using CD140a mAb against HEK293 (1) and CD140a (AA: extra 179-361)-hIgGFc transfected HEK293 (2) cell lysate.

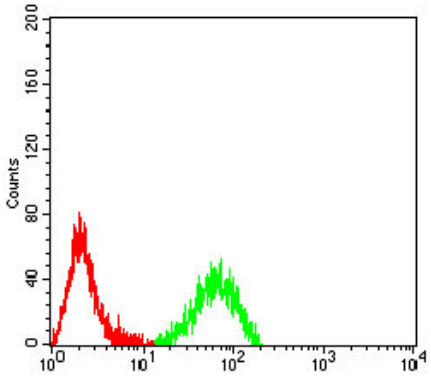


Figure 4:Flow cytometric analysis of Raji cells using CD140a mouse mAb (green) and negative control (red).

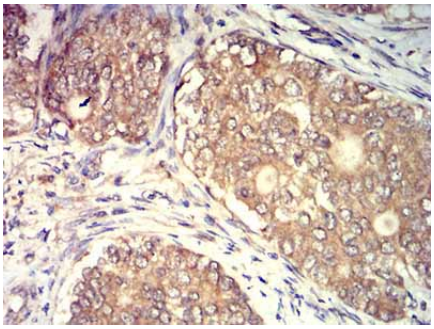


Figure 5:Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using CD140a mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.